

AMENDMENT TO THE CLAIMS

1-11. (Cancelled)

12. (Withdrawn-Currently Amended) Cultured cells producing an inflammatory cytokine, to which the immunopotentiator as claimed in ~~claim 1~~claim 20 is administered to enhance an immunoactivity.

13. (Withdrawn-Currently Amended) Cultured cells producing an inflammatory cytokine, to which the immunopotentiator as claimed in ~~claim 1~~claim 20 together with a composition comprising as an active ingredient a nucleic acid containing a microbial nucleic acid-specific non-methylated CpG sequence or a plasmid having the nucleic acid containing the microbial nucleic acid-specific non-methylated CpG sequence are simultaneously administered to further enhance an immunoactivity.

14. (Withdrawn) The cultured cells as claimed in claim 12, which are derived from mammals including humans.

15. (Withdrawn-Currently Amended) A method for enhancing an immunoactivity of mammals, which comprises administering to mammals the immunopotentiator as claimed in ~~claim 1~~claim 20 to enhance an immunoactivity of mammals.

16. (Withdrawn-Currently Amended) A method for enhancing an immunoactivity of mammals, which comprises simultaneously administering to mammals the immunopotentiator as claimed in ~~claim 1~~claim 20 together with a composition comprising as an active ingredient a nucleic acid containing a microbial nucleic acid-specific non-methylated CpG sequence or a plasmid having the nucleic acid containing the microbial nucleic acid-specific non-methylated CpG sequence to further enhance an immunoactivity of mammals.

17. (Withdrawn-Currently Amended) Non-human mammals to which the immunopotentiator as claimed in ~~claim 1~~claim 20 is administered to enhance an immunoactivity.

18. (Withdrawn-Currently Amended) Non-human mammals to which the immunopotentiator as claimed in ~~claim 1~~ claim 20 together with a composition comprising as an active ingredient a nucleic acid containing a microbial nucleic acid-specific non-methylated CpG sequence or a plasmid having the nucleic acid containing the microbial nucleic acid-specific non-methylated CpG sequence are simultaneously administered to further enhance an immunoactivity.

19. (Withdrawn) The non-human mammals as claimed in claim 17, which are mice.

20. (New) An immunopotentiator for animals, which comprises as an active ingredient a nucleic acid containing a nucleic acid base or a plasmid having the nucleic acid containing the nucleic acid base, wherein the nucleic acid base is at least one nucleic acid base selected from the group consisting of thymine glycol, cytosine glycol, oxanine, pyrimidine dimer, O6-methylguanine and a microbial nucleic acid-specific N⁶-methyladenine.

21. (New) The immunopotentiator as claimed in claim 20, wherein the nucleic acid contains the microbial nucleic acid-specific N⁶-methyladenine and is a nucleic acid having the base sequence of SEQ ID NO: 4.

22. (New) The immunopotentiator as claimed in claim 20, wherein the microbial nucleic acid-specific N⁶-methyladenine is from a virus or a bacterium.

23. (New) The immunopotentiator as claimed in claim 22, wherein the bacterium is *Escherichia coli*.

24. (New) An immunopotentiator for animals, which comprises:
a nucleic acid containing a nucleic acid base or a plasmid having the nucleic acid containing the nucleic acid base, wherein the nucleic acid base is at least one nucleic acid base selected from the group consisting of thymine glycol, cytosine glycol, oxanine, pyrimidine dimer, O6-methylguanine and a microbial nucleic acid-specific N⁶-methyladenine; and

a second nucleic acid containing a microbial nucleic acid-specific non-methylated CpG sequence or a plasmid having the nucleic acid containing the microbial nucleic acid-specific non-methylated CpG sequence.

25. (New) The immunopotentiator as claimed in claim 24, wherein the nucleic acid contains the microbial nucleic acid-specific N⁶-methyladenine and is a nucleic acid having the base sequence of SEQ ID NO: 4.

26. (New) The immunopotentiator as claimed in claim 24, wherein the nucleic acid containing the microbial nucleic acid-specific non-methylated CpG sequence is a nucleic acid having the base sequence of SEQ ID NO: 2.

27. (New) The immunopotentiator as claimed in claim 24, wherein the microbial nucleic acid-specific N⁶-methyladenine is from a virus or a bacterium.

28. (New) The immunopotentiator as claimed in claim 27, wherein the bacterium is *Escherichia coli*.

29. (New) A process for producing an inflammatory cytokine, which comprises administering an immunopotentiator as to cultured cells to enhance an immunoactivity of the cultured cells and produce the inflammatory cytokine,

wherein the immunopotentiator comprises as an active ingredient a nucleic acid containing a nucleic acid base or a plasmid having the nucleic acid containing the nucleic acid base, wherein the nucleic acid base is at least one nucleic acid base selected from the group consisting of 8-oxoadenine, 2-oxoadenine, 5-hydroxyuracil, 5-formyluracil, 5-formylcytosine, 8-nitroguanine, thymine glycol, cytosine glycol, hypoxanthine, oxanine, pyrimidine dimer, O6-methylguanine, O4-methylthymine and a microbial nucleic acid-specific modified base, wherein the microbial nucleic acid-specific modified base is selected from the group consisting of N⁶-methyladenine, 5-hydroxymethyluracil and 5-hydroxymethylcytosine.

30. (New) The process according to claim 29, wherein the nucleic acid contains the microbial nucleic acid-specific modified base and is a nucleic acid having the base sequence of SEQ ID NO: 4.

31. (New) The process according to claim 29, wherein the the microbial nucleic acid-specific modified base is from a virus or a bacterium.

32. (New) The process according to claim 31, wherein the bacterium is *Escherichia coli*.

33. (New) A process for producing an inflammatory cytokine, which comprises administrating to cultured cells an immunopotentiator and a nucleic acid containing a microbial nucleic acid-specific non-methylated CpG sequence or a plasmid having the nucleic acid containing the microbial nucleic acid-specific non-methylated CpG sequence to enhance an immunoactivity of the cultured cells and produce the inflammatory cytokine,

wherein the immunopotentiator comprises a nucleic acid containing a nucleic acid base or a plasmid having the nucleic acid containing the nucleic acid base, wherein the nucleic acid base is at least one nucleic acid base selected from the group consisting of 8-oxoadnine, 2-oxoadenine, 5-hydroxyuracil, 5-formyluracil, 5-formylcytosine, 8-nitroguanine, thymine glycol, cytosine glycol, hypoxanthine, oxanine, pyrimidine dimmer, O6-methylguanine, O4-methylthymine and a microbial nucleic acid-specific modified base, wherein the microbial nucleic acid-specific modified base is selected from the group consisting of N6-methyladenine, 5-hydroxymethyluracil and 5-hydroxymethylcytosine.

34. (New) The process according to claim 33, wherein the nucleic acid contains the microbial nucleic acid-specific modified base and is a nucleic acid having the base sequence of SEQ ID NO: 4.

35. (New) The process according to claim 33, wherein the nucleic acid containing the microbial nucleic acid-specific non-methylated CpG sequence is a nucleic acid having the base sequence of SEQ ID NO: 2.

36. (New) The process according to claim 33, wherein the the microbial nucleic acid-specific modified base is from a virus or a bacterium.

37. (New) The process according to claim 36, wherein the bacterium is *Escherichia coli*.